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IN THE
# Supreme Court of the United States

NORMA MCCORVEY, FORMERLY KNOWN AS JANE ROE,

*Petitioner*,

v.

WILLIAM "BILL" HILL,
DALLAS COUNTY DISTRICT ATTORNEY,

*Respondent.*

**On Petition for Writ of Certiorari to the United States Court of Appeals for the Fifth Circuit**

## BRIEF OF AMICI CURIAE MAUREEN CURLEY, MS, APRN, BC; MARY DEVINE, MSW, CASAC; FRAN M. BLACK, RN, MSN, CRFNP; AND FELIX J. CALLAN, M.D. IN SUPPORT OF PETITIONER

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## STATEMENT OF INTEREST[1]

Amicus, Maureen L. Curley is an advanced practice psychiatric nurse specializing in perinatal mood disorders with a focus on post abortion psychological stress. She has had extensive clinical experience and practice in the field of psychiatric nursing at various hospitals and clinics throughout the country since 1976. She is an associate clinical faculty member in psychiatric nursing with the University of Massachusetts at Amherst, School of Nursing, and is currently a PhD candidate in nursing with McGill University in Montreal, Canada. Ms. Curley has participated in numerous presentations and lectures in the field of psychiatric nursing particularly with respect to the psychological effects of abortion. She also gave expert testimony pertaining to parental notification of abortion for minors before the Vermont Legislative Health, Welfare and Judicial Committees in 2001 and 2002.

Amicus, Mary Devine is a licensed Masters of Social Work and a certified alcohol substance abuse counselor in New York State. She earned her Masters degree from Fordham University in 1996. Prior to obtaining her Masters, Ms. Devine was a certified Social Worker in New York State since 1989. She is currently a clinical supervisor at NRI, LLC. in New York City, which provides addiction rehabilitation in a twenty eight day program. Specifically, she provides in-house psychotherapy and crisis intervention to

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[1] Counsel for Amici Curiae authored this brief in its entirety in collaboration with John Virdone, Esq. Allen Sullivan, Esq. also assisted in editing the brief. No person or entity, other than the named Amici Curiae, supporters, or counsel, made a monetary contribution to the preparation or submission of this brief. Amici have obtained consent for this brief from all parties. The written consents from all parties have been filed with the Court.

clients, and supervises and trains Masters of Social Work students and other clinical staff.

Amicus, Fran M. Black is a certified family nurse practioner with a focus on woman health. She is licensed in Virginia and Washington D.C. Ms. Black received her Masters in Nursing from Marymount University in Arlington, Virginia in 1996, but has worked as a registered nurse since 1965. Currently, she is employed as a nurse practioner with The World Bank in Washington D.C. In 2002, Ms. Black was invited and participated in the "Cardiovascular Health for Women Invitational Conference," at Johns Hopkins Nursing School in Baltimore, Maryland. She is a member of the American Academy of Nurse Practioners and the Virginia Council of Nurse Practioners.

Amicus, Felix J. Callan, is a retired Orthropedic surgeon. He earned his medical degree from Yale University School of Medicine in 1956. Dr. Callan conducted is medical internship at the Minneapolis General Hospital from 1956-1957 and general surgical residency at Darthmouth Medical Center from 1957-1958. In addition, Dr. Callan practiced at Scott Air Force Base Regional Orthropedic Referral Hospital in Bellville, Illinois while serving in the U.S. Air Force with a rank of Captain from 1958-1963. Thereafter, he practiced orthropedic surgery at Danbury Hospital, Danbury Connecticut from 1963-1973 and Central Vermont Hospital, Berlin, Vermont from 1974-2000. He is a diplomate of the American Board of Orthopedic Surgeons and a member of the Vermont State Medical Society.

This case addresses the continuing validity of *Roe v. Wade*[2], and its progeny. Amici are concerned about the serious adverse psychological affects of abortion, particularly

[2] 410 U.S. 113 (1973)

on adolescents and university students. Ms. Curley's extensive clinical practice, teaching and research in the area of perinatal and post abortion stress disorders commenced in 1976. This experience renders her exceptionally qualified to make a determination, based on compelling evidence, that abortion is dangerous for the short and long term psychological health of women, particularly for younger and psychologically vulnerable women. In her clinical practice and research, Ms. Curley found a direct correlation between women who have a history of induced voluntary abortions and a higher risk of suicide, self-destructive behaviors (i.e. promiscuity, substance abuse, alcoholism and a history of failed relationships) and stress disorders. She reports that younger women who have abortions are the most vulnerable to psychiatric morbidity and mortality. Ms. Curley notes that the dynamics of abortion perpetuates the problem because the supply of abortion creates the demand for abortion. Therefore, she concludes that the most effective method or the strongest deterrent to reducing the incidence of psychiatric morbidity and mortality associated with abortion is to make abortion unavailable altogether.

## SUMMARY OF ARGUMENTS

1. New and compelling evidence, gathered since *Roe v. Wade* and its progeny were decided, demonstrates that abortion is dangerous for the short and long term psychological health of women generally, and particularly among younger and more vulnerable women.

2. Based on this new evidence, the State has a compelling interest to exercise its police powers and proscribe abortion in order to preserve and protect the psychological health of women.

3. The fundamental 'right to privacy' is not absolute and is currently subject to proscription in certain other circumstances (i.e. narcotics use, prostitution, polygamy.) State laws proscribing such illegal activities are valid and are narrowly tailored to achieve the State's legitimate interest in protecting the public health and welfare. Similarly, the State of Texas penal laws proscribing abortion activities are narrowly tailored to achieve the State's legitimate interest in preserving and protecting the psychological health of women.

4. Based on the foregoing, the Court should grant certiorari, to consider whether *Roe v Wade*, and its progeny are in fact sustainable in the face of this new and compelling evidence that abortion is dangerous for the short and long term psychological health of women.

## ARGUMENTS

## I.

## CERTIORARI IS WARRANTED BECAUSE NEW EMPIRICAL EVIDENCE GATHERED SINCE ROE V. WADE PROVES THAT ABORTION ADVERSELY EFFECTS WOMEN'S PSYCHOLOGICAL HEALTH

Maureen Curley, ("Curley") in her paper, *"The Impact of Abortion on the Public Health and Welfare."(2004)*[3] reports her findings that abortion is unsafe for the psychological health of women. She concludes that the 'strongest deterrent' to post-abortion psychological disorders is to make it unavailable altogether.

Curley's paper cites mounting new empirical evidence linking a history of induced abortion with high rates of psychiatric morbidity and mortality.[4] She cites various psychological studies conducted over the last ten years showing that suicide rates for women who have abortions are three times higher than the rate for women in general.[5] She also reports that with regard to women's mental health, epidemiological data[6] "suggests [that] abortion is

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[3] A copy of Amicus' paper is annexed to this brief.

[4] *Id* at 3

[5] *Id* at.4

[6] Epidemiological data refers to a higher quality of study and evidence than was done before for the abortion aftermath. Epidemiological studies use large sample sizes, with objective versus subjective measures, and use medical records that clearly link a history of abortion with a history of suicide, death etc. Therefore, these results are not subject to interpretation or dispute and are more reliable than expert opinion. *Id* at 3-4.

significantly less safe than previously thought and actually life threatening for women."[7]

Curley also reports that these studies are supported by data showing an increased incidence of women worldwide seeking services for post-abortion psychological distress.[8] Curley observed that because health care professionals have not traditionally recognized the psychological distress effects of abortion, there has been a proliferation of post abortion support groups, websites and self-help resources. Therefore, Curley finds post abortive women are fast becoming a marginalized and under-served population in health care.[9]

The women most affected are those between 20 and 24 years of age who exhibit the highest incidence of psychological distress after abortion.[10] This is significant because women in this age group 1) consistently choose abortion to relieve psychological distress in their lives and 2) have the highest rate of repeat abortions.[11]

Curley has personally treated over one hundred women who have experienced short or long term psychological effects of abortion.[12] The affects include cases of completed suicide, treatment resistant depression, all types of stress disorders, as well as post-partum and ante-partum

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[7] *Id.at 5*

[8] *Id* at 5.

[9] *Id*

[10] *Id* at 6.

[11] *Id*

[12] *Id* at 8.

psychological disorders.[13] Curley states that such clinical data are consistent with the accruing empirical data as well as with the theoretical assertion that abortion induces a psychological stress syndrome for many women.[14] Curley reports that if the conflict is not resolved, post abortion psychological distress will result in a pathological response including repeated pregnancies with repeated abortions.[15]

Curley provides five case examples of the adverse psychological effects of abortion.[16] In two cases, the women, reporting post abortion psychological distress, completed suicide; in another the woman attempted suicide; in two others, the women described becoming promiscuous immediately after their abortion (i.e 100 sexual partners in six years and another 60 partners in 10 years.)[17]

In fact, Curley challenges the pro-choice ideology as "overly simplistic and concrete with no place for women who are distressed over their abortion, regret their abortion or whose reaction may change from one of initial relief to one of distress or dissatisfaction later."[18] In sum, Curley concludes that, when comparing similar populations, younger and more psychologically vulnerable women who give birth demonstrate less adverse short and long-term psychological effects than those who abort. Actually, she states those who

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[13] *Id*

[14] *Id* at 8

[15] *Id* at 9.

[16] *Id* at 9-13.

[17] *Id*

[18] *Id* at 13

deliver are less likely to engage in high-risk behaviors because motherhood acts as a protective factor to vulnerable women who have self-destructive tendencies. Even if the woman does not choose to rear the child, the short and long-term stress associated with aborting a pregnancy outweighs the risk associated with giving birth.[19]

## II.

## CERTIORARI IS WARRANTED BECAUSE THE RIGHT TO CHOOSE ABORTION IS NOT ABSOLUTE AND THE STATE HAS A COMPELLING INTEREST IN PROTECTING WOMEN FROM THE DANGEROUS PSYCHOLOGICAL EFFECTS OF ABORTION

New evidence proves that abortion is harmful to women's psychological health, and therefore, women's right to choose abortion must give way to the State's legitimate interest in preserving and protecting their psychological health. In *Roe* and its progeny, this Court did not consider this new evidence, which demonstrates that abortion is dangerous for women. Therefore, the Court should grant certiorari to consider this new evidence and the affects of abortion on millions of women each year.

The Court's plurality opinion in *Roe* stated that a women's "right to privacy" encompasses a woman's decision whether or not to terminate her pregnancy. In support of its ruling, the Court stated:

> The detriment that the state would impose upon the pregnant women by denying their choice altogether is apparent. Specific and direct harm medically diagnosable even in the early

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[19] *Id* at 14.

> pregnancy may be involved. Maternity, or additional offspring may force upon a women a distressful life or future. Psychological harm may be imminent. Mental and physical health may be taxed by child care. There is also the distress, for all concerned associated with the unwanted child, and there is a problem of bringing a child into a family already unable, psychologically and otherwise, to care for it. In other cases, as in this one, the additional difficulties and continuing stigma of unwed motherhood may be involved. All these are factors the women and her responsible physician necessarily will consider.[20]

Accordingly, the *Roe* Court relied on factors relating to psychological harm that it associated with unwanted pregnancies to justify, in part, its decision to uphold a women's right to choose abortion. In addition, the *Roe* Court held that "the State does have an important and legitimate interest in preserving and protecting the health of the pregnant women."[21] However, the Court elaborated that "the 'compelling point,' in light of the present medical knowledge is at approximately the end of the first trimester."[22] At which point, the Court held, "the State may regulate abortion as long as it is reasonably related to the preservation and protection of the maternal health."[23] Nineteen years after *Roe*, the Supreme Court, in a plurality of five Justices,

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[20] *supra* at p 153

[21] *Id* at 162-163.

[22] *Id* [emphasis added]

[23] *Id.*

invalidated *Roe's* trimester framework, but nevertheless, reaffirmed a woman's right to choose to terminate her pregnancy before the time of viability. *See Planned Parenthood of Southeastern Pennsylvania, et. al. v. Casey et. al.*[24] The psychological impact or harm of an unwanted pregnancy on the health of the woman was paramount to both the *Roe* and *Casey* Courts' analysis of a woman's interest in whether or not to choose to terminate her pregnancy. The Court in *Casey* explained:

> The mother who carries a child to full term is subject to anxieties, to physical constraints, to pain that only she must bear.... her suffering is too intimate and personal for the state to insist, without more, upon its own vision of the woman's role...[25]

It also determined that "it can not be questioned that psychological well being is a facet of health."[26] Justice Stevens in his dissent in *Casey* wrote:

> In general *Roe's* requirement that restrictions on abortion before viability be justified by the State's interest in maternal health has prevented states from interjecting regulations designed to influence a woman's decision, thus we have upheld regulations of abortions that are not efforts to sway or direct a women's choice, but rather are efforts to enhance the deliberative

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[24] 505 US 833, 870, 112 S. Ct. 2791, 120 L. Ed. 2d 674 (1992).

[25] *Id* at 852. [emphasis added]

[26] *Id* at 882. See also *United States v. Vuitch*, 402 U.S. 62, 72, 91 S.Ct. 1294 (1971)

quality of that decision or are neutral regulations on the health aspects of her decision. [27]

Therefore, there was also wide recognition by most members of the Court that the State does have a legitimate interest in regulating a woman's decision to have an abortion when such interest is neutral and seeks to promote maternal health.

Prior to the *Roe* and *Casey* decisions, in order for the State to legally regulate a fundamental right, this Court required the State's interest to be compelling. Fundamental rights can be regulated if the State's interest is compelling and the enactment is narrowly tailored to achieve the State's interest. See *Reno v. Flores*[28], ("Respondent's substantive due process claim relies upon our line of cases which interprets the fifth and fourteenth Amendment's guarantee of 'due process of law' to include a substantive component, which forbids the government to infringement on fundamental liberty interests at all no matter what process is provided unless the infringement is narrowly tailored to serve a compelling state action."), and *Washington v. Glucksberg*.[29] Therefore, the 'right to privacy' and the abortion decision can be regulated if there is a compelling state interest narrowly tailored to achieve that interest. Even the *Roe* Court stated "the privacy right involved, [therefore], cannot be said to be absolute."[30] Given the Court's holding that the privacy right is not absolute, can the State ever have a sufficiently compelling interest to proscribe the abortion decision

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[27] *Id* at 916.

[28] 507 U.S. 292, 113 S. Ct. 1439, 1447 (1993)

[29] 521 U.S. 702, 721, 117 S.Ct. 225 (1997) citing *Flores*.

[30] *Id* at 154.[emphasis added]

altogether? However, before analysis of the arguments for this position is demonstrated, a review of the *Casey* standard is necessary.

The *Casey* decision fundamentally changed the Court's standard in determining whether the abortion choice prior to viability can be regulated by the State. The *Casey* Court abandoned *Roe's* trimester framework and the 'compelling interest' standard traditionally used in cases involving the alleged deprivation of fundamental rights. In its place, the Court substituted an 'undue burden' standard that now analyzes State regulation prior to the time of viability on whether or not it is a 'substantial obstacle' to the abortion choice. Nevertheless, whether pursuant to the 'compelling interest' standard or the 'undue burden' standard both *Roe* and its progeny as well as *Casey* affirm that the State's interest in promoting maternal health can be sufficiently compelling to justify regulating or even proscribing the abortion choice altogether.

## III.

## CERTIORARI IS WARRANTED BECAUSE THE STATE'S COMPELLING INTEREST IN PROTECTING WOMEN'S PSYCHOLOGICAL HEALTH MAY INCLUDE PROSCRIBING THE ABORTION CHOICE

This Court should grant certiorari and overturn *Roe v. Wade* because the psychological harm to women who have abortions greatly outweighs any pain, discomfort, suffering, or other psychological harm women may experience in bringing their unwanted pregnancies to full term. This Court has acknowledged that the State has a legitimate interest in preserving and protecting maternal health, which includes their psychological well-being.[31] Recent empirical research and case studies demonstrate that the psychological harm that abortion itself causes women makes the State's interest in proscribing the abortion decision altogether sufficiently compelling. The State's compelling interest in preventing this significantly greater psychological harm to post-abortive women is narrowly drawn and serves the State's legitimate interest. There is no more effective method preventing the overwhelming and dangerous psychological harm caused by abortion other than proscribing the procedure altogether.[32]

Although this Court has previously characterized a woman's choice of terminating her pregnancy as a fundamental right, there are presently many other instances in which a woman's 'right to privacy' is altogether proscribed by the State's police powers in its legitimate

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[31] *Casey* supra at 882.

[32] See generally, Curley, Maureen, *"The Impact of Abortion on Public Health and Safety." (2005)*

interest to protect the public health and welfare. For instance, there has never been a question or any doubt that the State has a legitimate interest in proscribing women's (and men's) use of certain narcotics, or participation in activities such as prostitution or polygamy. See *United States v. Oakland Cannabis Buyer's Cooperative*,[33] (Supreme Court upheld federal statute prohibiting the manufacture, distribution and use of marijuana except for government-approved research projects. The Court held that the statute reflects a determination that marijuana has no medical benefits worthy of an exception.) In *State of Minnesota ex rel Whipple v. Martinson*,[34] the Court held :

> There can be no question of the authority of the state in the exercise of its police powers to regulate the administration, sale, prescription and use of dangerous and habit forming drugs such as are named in the statute. The right to exercise this power is so manifest in the interest of the public health and welfare that it is unnecessary to enter upon a discussion of it beyond saying that it is too firmly established to be successfully called into question.

Further, it has been our constitutional tradition to proscribe suicide and assisted suicide. See *Glucksberg*,[35] (Supreme Court upheld State's reasonable interest in prohibiting assisted suicide. The Court indicated that the State's interest in proscribing suicide and assisted suicide were part of a long historical tradition.) Also, Curley points to the fact that the

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[33] 532 U.S. 483, 121 S.Ct. 1711 (2001)

[34] 256 U.S. 41, 45, 41 S.Ct. 425 (1921)

[35] supra at 710-719

States already prohibit certain pharmaceutical agents that incur death or inflict injury on the same level or extent that it is now known that abortion does.[36] She indicates that the removal of Vioxx from the market due to cardiovascular risks, and the prohibition of most antidepressant use in children are recent examples of effective blanket restrictions, imposed by the State, to promote public health and safety.[37] Obviously, all of these proscribed activities involve personal matters regarding the use and control of one's own body. In this case, the State's compelling interest in proscribing abortion is narrowly tailored to prevent the greater psychological harm that the procedure causes women.

The State's legitimate interest in proscribing abortion is sufficiently compelling to overcome the 'undue burden' standard pronounced in *Casey.* In that decision, the Court stated:

> *Roe v. Wade* was express in its recognition of the state's important and legitimate interest in preserving and protecting the health of the pregnant woman [and] in protecting the potentiality of human life.[38]

In addition the *Casey* Court also stated: "In our view the undue burden standard is the appropriate means of reconciling the State's interest with the women's constitutionally protected liberty."[39] The Court defined the 'undue burden' standard as follows:

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[36] Curley, supra at 15

[37] *Id.*

[38] *Casey*, supra at 876 citing *Roe* at 162.

[39] *Id* at 876.

> A finding of an undue burden is a shorthand for the conclusion that a state regulation has the purpose or effect of placing a substantial obstacle in the path of a women seeking an abortion of a nonviable fetus. A statute with this purpose is invalid because the means chosen by the state in the interest in the potential life must be calculated to inform the women's free choice, not hinder it. And a statute which, while furthering the interest in potential life or some other valid state interest, has the effect of placing a substantial obstacle in the path of a woman's choice cannot be considered a permissible means of serving its legitimate ends.[40]

The *Casey* Court's application of the 'undue burden' standard would, at first glance, seem to indicate that a woman's right to choose to abort a nonviable fetus could never, even for the most compelling reasons, be proscribed. Such a restrictive interpretation of the holding in that decision could not be correct as it would be inconsistent with traditional due process jurisprudence. Even the *Roe* Court acknowledged that "the privacy right involved, [therefore], cannot be said to be absolute."[41] Certainly, a woman's privacy right could not be absolute if it conflicted with another person's fundamental right. See *Burson v. Freeman*,[42] (Supreme Court upheld State's 'compelling interest' in forbidding the fundamental right to political speech within 100 yards of a polling place in order to protect the fundamental 'right to vote' from fraud and undue

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[40] *Casey* at 877.

[41] *Id* at 154. [emphasis added]

[42] 504 US 191, 211, 112 S.Ct. 1846 (1992)

influence, which were in conflict.) For example, the *Roe* Court acknowledged that, if the "personhood [of the fetus] is established, the appellant's case, of course, collapses, for the fetus 'right to life' would then be guaranteed specifically by the amendment."[43] Therefore, since it is not possible for the privacy right to be absolute, even pursuant to the 'undue burden' standard, a sufficiently compelling State interest to protect another person's fundamental right could require that the abortion choice be proscribed altogether.

In addition, even pursuant to the 'undue burden' test, in this matter, there is a sufficient compelling State interest to proscribe the abortion decision altogether because of the significantly greater detrimental and even lethal psychological consequences to women caused by abortion. Curley strongly asserts that the psychological harm caused by abortion greatly outweighs the psychological harm that may be caused in bringing an unwanted pregnancy to full term.[44] She holds that just as the State's prohibition of Vioxx from the public and antidepressant use in children is effective and legitimate, the most effective way to preserve and protect the psychological health of women from the detrimental and lethal affects of abortion is to bar the procedure.[45] Given the now known dangerous effects of abortion on women's psychological health, the State's compelling interest in proscribing the abortion choice altogether cannot be considered unconstitutional or a 'substantial obstacle' to a woman's 'right to privacy,' any more than the State's prohibition of prostitution, the use of narcotics, Vioxx, and antidepressant use in children is a 'substantial obstacle' to

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[43] supra at 156-157.[emphasis added]

[44] *Curley, supra* at 14

[45] *Id* at 15

the privacy right of a person to engage in such injurious activities.

## CONCLUSION

Based on the forgoing arguments, this Court should grant certiorari to consider recently emerged empirical evidence, demonstrating that abortion is dangerous for women, to determine whether it should vacate *Roe v. Wade* and its progeny, and to provide any other relief this Court deems just and proper.

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Respectfully submitted:

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# APPENDIX

# THE IMPACT OF ABORTION ON PUBLIC HEALTH AND SAFETY

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January 20, 2005

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## *Introduction*

Post abortion psychological distress is becoming a new public health problem (Speckhard and Rue 1992). Increasing evidence associates a history of abortion with higher rates of mortality (Gissler, Berg, Bouvier-Colle & Buekens 2004), suicide (Gissler, Hemminki, & Lonnqvist 1996), self-destructive behaviors (Houston and Jacobson 1996), and stress disorders among women who experience induced voluntary abortion. Until recently, abortion was indicated to relieve the psychological distress imposed by an unwanted pregnancy. Now, several alarming and independent trends are converging to shift the abortion paradigm from promoting psychological health to promoting psychological harm for women. Of significance, is that younger women and vulnerable women have the highest risk for psychiatric mortality and morbidity after abortion. This is of particular concern as younger women are the population having most abortions.

## *New Evidence for Post Abortion Psychological Distress*

The first and most signficant trend is that, in an era of evidence based healthcare, compelling evidence linking a history of induced voluntary abortion with unacceptabley high rates of psychiatric morbidity and mortality is mounting. A developing body of knowledge points to the detrimental effects of abortion on women from a global perspective. Case reports, descriptive studies, and most recently epidemiological studies accumulate as empirical evidence of post abortion psychological distress increases according to levels of knowledge development (Brink & Wood 1998). See Table 1. Studies Identifying Post Abortion Psychological Stress. While early studies assessing the psychological safety of abortion were limited by methodological gaps (Rue, Speckhard, Rogers, and Franz 1989), recent epidemiological

studies correct for these gaps. Epidemiological studies use large population-based samples with data from several thousand to several hundred thousand women. In addition, epidemiolgical studies collect data from medical records rather than patient self-report. This eliminates the methodological problems of patient non-disclosure of abortion as well as high patient drop-out rates which were common in earlier post-abortion research. These methodlogical gaps resulted in underestimating the adverse outcomes of abortion. Moreover, epidemiological studies use clear patient outcome measures such as suicide, psychiatric admission, or psychiatric service utilization that are not subject to researcher bias. Finally, epidemiological studies compare women who have had abortions to women who deliver as well as women in the general population. These comparison groups more accurately assess the impact of abortion within similar reproductive populations (Ney and Wickett 1989)..

Key studies find striking results for high rates of psychiatric mortality and morbidity among women who have abortions. For example, in one study, Gissler and colleagues (2004) found that women who have abortions have a three times higher mortality rate (83.1 deaths per 100,000 women vs. 28.2 deaths per 100,000 women) when compared to women who deliver among a sample of Finnish women. In a similar study, Gissler, Hemminki, and Lonnqvist (1996) found a six-times higher suicide rate for women who have abortions when compared to women who deliver (34.7 suicides per 100,000 women vs. 5.9 suicides per 100,000 women) and an almost two-times higher suicide rate for women who have abortions when compared to women who miscarry (34.7 suicides per 100,000 women vs. 18.1 suicides per 100,000 women). They also found a three times higher suicide rate for women who have abortions when compared to the suicide rate for women in the general population. This

latter finding was replicated by Morgan and colleagues (1997) who similarly found a three times higher suicide rate for 408,000 women thirty days after abortion as compared to before abortion. The authors conclude that there may be an increased risk for suicide after abortion. In another study exposing the impact of abortion on psychiatric morbidity, Reardon and colleagues (2003) analyzed over 56, 000 health records from a sample of low-income women in California. They compared psychiatric hospitalization admission rates three months after pregnancy outcome for women who have abortions to women who deliver and women in the general population. Results showed that women who have abortions had a 2.6 times higher rate of psychiatric admission than do women who deliver. Among age groups, women ages 20 to 24 years were found to have the highest psychiatric admission rate. These results are consistent with most studies that conclude younger women are the most adversely affected by abortion.

The results of these studies are alarming for several reasons. First, all studies point to the fact that abortion either directly or indirectly contributes to death or severe psychological injury shortly after abortion for a representative sample of women worldwide. Second, studies that analyze results by age group note a higher rate of death or injury for women between the ages of 20 to 24 years. This is significant as women between the ages of 20 to 24 years have the highest incidence of abortions worldwide. In addition, these data provide the strongest level of evidence to date on the psychiatric aftermath of abortion. This stands in stark contrast to early conclusions concerning the safety of abortion. Surprisingly, many of these conclusions which shaped abortion policy in the United States, are based on expert opinion rather than emprical data. According to the Cochrane Collaboration on Systematic Reviews, considered by some to provide the gold standard for evidenced-based

healthcare, expert opinion is often based on bias rather than scientific merit. Stotland (2004) illlustrates the influence of bias-based expert opinion over science in a recent testimony in support of the safety of abortion before a hearing of the United States Senate Sub-Committee on Commerce, Science Technology, and Space on the Impact of Abortion on Women's Health. Surprisingly, Stotland reported none of these new scientific data. Moreover, these data suggesting abortion is less safe than birth refute early data that promoted legalization suggesting abortion is safer than childbirth. Of further concern is that, these data suggest abortion is not only markedly less safe than previously thought , but actually life-threatening for many women.

***Incidence of Post Abortion Psychological Distress***

The second trend is an increased incidence of women worldwide seeking services for post abortion psychological distress.The rapid proliferation of international post abortion support groups, web-sites, and self-help resources demonstrates this unmet demand for services. However, due to a lack of dissemination of these research findings, healthcare providers have been slow to recognize post abortion psychological distress. As a result, distressed post aborted women are fast becoming a new marginalized and under-served population in healthcare.

According to United Nations data, approximately 46 million women worldwide between the ages of 15 and 44 years have legal, induced abortions each year (United Nations 2002). Of these, between 30% and 40% are repeat abortions. Rates of abortion vary significantly among age groups. Worldwide abortion rates are the highest for women between the ages of 20 to 24 years. On average the abortion rate for this age group is approximately 35 abortions per 1000 women within developed countries (AGI 1999). The United States exceeds this rate with approximately 53

abortions per 1000 women as compared to 31 per 1000 women in Canada and 37 per 1000 women in Australia. In addition to having the highest incidence of abortion, women between the ages of 20 and 24 years also have the highest incidence of psychological distress after abortion. This is significant as women within this age group consistently choose abortion in order to relieve psychological distress in their lives. Furthermore, women within this age group represent the population that has the highest rate of repeat abortions. Some suggest repeat pregnancy and repeat abortion emerge from the psychological distress associated with abortion where the conflict due to the pregnancy or abortion becomes re-enacted until it is resolved (Speckhard and Rue 1992). The World Health Organization recognizes the problem of repeat abortions particularly for women under twenty five and recommends effective post abortion counseling that target this problem (WHO 2003). However, WHO falls short by limiting intervention to a contraceptive rather than psychological focus thereby unsuccessfully treating the symptom rather than the cause of repetitive abortions and pregnancies.

Many conclude that all complications from abortion are underestimated (Health Canada 2000; Cassidy & Gentiles 2000). Estimates vary considerably ranging from 1% (Major et al 2000), 10% (Coleman 2002; Adler 1989) up to 46% (Mulfel et al 2002) and even 50% (Lodle 1985). Some conclude that at least 10% of women suffer lingering psychological distress from abortion that is severe enough to warrant psychological intervention (Coleman 2002; Adler 1989; Lodle 1985; Ekblad 1955). However, this estimate does not include women who present with a delayed stress response to abortion, women who drop out of studies, or the higher incidence of distress among younger women. Rather, based on clinical practice, and consistent with the accruing evidence, this author estimates that the incidence of severe

psychological dstress after abortion for younger women is well over 50%. For example. two major New England universities reported a 60% and 75% referral rate respectively for mental health services for their students after abortion. Of concern is the fact that 50% of the population having most of the more than one million abortions per year represents a substantial segment of the population who are adversely affected by abortion.in the United States.

Younger women are the most vulnerable for negative post abortion psychological sequelae for several reasons. Younger women are more likely to experience abortion as a severe stressor due the presence of multiple risk factors inherent within their developmental stage as well as the circumstances of the abortion. Risk factors for negative reactions to abortion salient to this age group include younger age, single status, lack of social support (David et al 1981), concealment from significant others (Franz & Reardon 1992), such as parents or healthcare providers, coersion to abort (Williams 2000a), and natural emotional immaturity. Mulfel (2000) described emotional immaturity related to abortion decision-making within younger women as a sense of no limitations, impulsive decision-making, and overly concrete thinking that minimizes how they may feel after abortion. In one of the few studies of abortion in this age group, Wheeler and Austin (2001) studied adolescents with early pregnancy loss including abortion. They conclude that this population can experience significant behavioral impairment if not resolved resulting in psychiatric morbidity, repeat pregnancy (Horowitz 1978), and repeat abortion (Speckhard and Rue 1992). Another factor that contributes to psychological vulnerability for young women after abortion is due to the critical phase of development during the female life span, as the onset of reproductive years. During this formative phase, developmental milestones such as psychosexual development, choice of vocation, life partner,

and the beginning of childbearing may occur. While no longitudinal data exist for determining the effect of abortion across the female lifespan to date, these new studies provide the most reliable evidence that abortion has a profoundly negative effect at a critical time in young women's lives.

While it is not clear why there is a greater demand for post abortion psychological services now, several changes in abortion services over the past decade may explain this phenomena. The first change is the advent of medical abortions, such as the RU-486 or Mifeprex. In contrast to surgical abortions, medical abortions require the woman to be an active agent in the procedure. Formerly, women were shielded from exposure to the embryo. With medical abortions, however, women are required to inspect the embryo in order to ensure a complete abortion. Studies that explore women's reactions to medical abortions report significant and unanticipated distress by many women (Elul, Pearlman, Sorhaindo, Simond, & Westoff 2000; Simonds, Ellerston, Springer, & Winkoff 1998). The second change is among the early cohort of women within the United States who have had abortions since 1973. Women who had abortions at ages 20 to 24 years and later during that time are now up to twenty and thirty years post abortion. After the passage of time, healing, and emotional maturity, many of these women retrospectively give public testimony to their experience of dissatisfaction, regret, and prolonged psychological distress as the result of abortion. Such women spearhead post abortion support and advocacy groups such as Silent No More and Operation Outcry that are gaining international momentum. Finally, after thirty-two years of unrestricted abortion policy, with unlimited access to abortion services on demand through all nine months of pregnancy, a social saturation point may be emerging. Consistent with theories of diffusion of innovation, innovation reaches a plateau after thirty years when a course

of time and segment of the population has been satiated. Similarly, the societal impact of abortion may be reaching a plateau where after more than thirty years, the social, cultural, and long term health risks far outweigh the benefits.

***Clinical Cases of Post Abortion Psychological Distress***

The third trend is an increased incidence of healthcare professionals who are beginningng to recognize adverse psychological effects of abortion in their clinical work (Hess 2004; Gray & Lassance 2004; Williams 2000b). Similarly, this author has treated over one hundred women who have experienced short-term and long-term adverse psychological effects of abortion including cases of completed suicide, attempted suicide, treatment resistant depression, and all types of psychological stress disorders, as well as postpartum and ante-partum disorders. These clinical data are in tandem with the accruing empirical data as well as the theoretical assertion that abortion induces a psychological stress syndrome for many women. This author is in agreement with others that abortion is psychologically harmful for women. Post abortion psychological distress follows the trajectory of symptom presentation, course, and severity of psychological stress disorders. Types of post abortion psycholgical distress that have been reported in the literature and treated by this author include psychiatric disorders that meet the DSM-IV (APA 2000) criteria for Major Depressive Episodes, Brief Reactive Psychosis, Adjustment Disorders, Acute, Chronic, and Delayed Post traumatic Stress Disorders as well as sub-clinical types of psychological and behavioral impairment.

Most types of post abortion psycholgical distress parallel the pathological phases of a Stress Syndromes as proposed by Horowitz (2000;1974). Horowitz theory of Stress Syndromes forms the theoretical underpinnings for all types of stress disorders within the American Psychiatric Association DSM-IV TR (APA 2000) diagnostic

classfications Horowitz conceptualizes the phases of a stress response include outcry as the traumatic event is unfolding, denial of the reality of the experience alternating with symptoms of intrusive re-living the event, working through the cognitive and affective experience of the event, and then completion. According to Horowitz, stress responses become pathological when the event is particularly intense or prolonged and require psychiatric intervention. In such cases, the stressor exceeds the coping skills and pathological avoidant behaviors result. Pathological avoidance includes depression, suicide, substance abuse, high-risk sexual, and self-destructive behaviors. Often, the event repeats itself because the conflict is never resolved. Moreover, pathological behaviors predispose the person to repeating a similar crisis. Post abortion psychological distress follows the trajectory of a pathological response to the stress of the abortion in both course and severity, including the incidence of repeat pregnancies and repeat abortions. This is particularly true for younger women and vulnerable women. The following cases from the authors' research practice and clinical practice illustrates psychological harm particularly for young women after abortion.

**Case 1**

As a nurse practitioner with a focus in post abortion psychological distress, this author was invited to educate staff of student health services of several universities within Canada and New England. All universities identified post abortion psychological distress as a problem among students that is unresponsive to either supportive or standard care. All university health centers identified psychological problems after abortion as a problem that required specialized mental health treatment.One health service report referring over 60% of women that have abortions for mental health services afterwards. It is noteworthy that women in Canada, where

there is a less controversial political climate surrounding abortion than in the United States, experience similar degrees of post abortion psychological distress as do women within the United States. These reports challenge the claims by some that the guilt that women experience after abortion is imposed by pro-life. demonstrators outside abortion clinics, as there is markedly less pro-life demonstration at abortion clinics within Canada.

**Case 2**

Stacy was a 20 year-old critical care nurse with no previous mental health history. The patient reported becoming suicidal and cutting her wrists immediately after her abortion. She contacted the abortion provider and was seen three times in an emergency room for unremitting psychological distress. According to patient report, she was given no mental health referral, no psychotropic medication intervention, and no follow up appointment. She stated that she was informed that the abortion provider could no longer help her. By the time she self-referred for out-patient mental health treatment to this clinician, she required an involuntary commitment to a psychiatric hospital due to active and persistent suicidal gestures.

Suicidal ideation after abortion can emerge as a short-term or long-term adverse response. One woman presented to a psychiatric hospital with post abortion psychosis, anorexia, and suicidal ideation shortly after abortion. The women had no former psychiatric history. During her admission, she was pre-occupied with extreme guilt mixed with paranoid ideation regarding her abortion. She re-compensated on antidepressant treatment, was permitted home on a weekend pass, and subsequently hung herself. Another women in her fifties had an abortion during her adolescence. As the patient began addressing the abortion she became increasingly more

guilt ridden, depressed, isolated, and alcohol abusing The patient self-referred to this author but due to a professional conflict was referred to another provider. In the interim, the patient, who had no history of suicidal gestures, completed a suicide via overdose.

Consistent with their developmental status, younger women experience psychological harm from the stress of an abortion due to their underdeveloped coping skills. While some claim that pre-abortion psycho pathology predicts post-abortion psycho pathology (Stotland 2004), this is not the case for younger women. Younger women with no previous mental health history can become overwhelmed and unable to master the stress of an abortion.

**Case 3**

I n a post abortion psychological support group, most of the self-referred women were less than 25 years old. None had any previous mental health history. Time since exposure to abortion ranged from several weeks to several years. All women experienced surgical abortions within the first trimester of pregnancy. All women procured abortion to relieve the psychological distress from an unwanted pregnancy and reported persistent psychological distress from weeks to years after the abortion. Several women reported being "surprised' are how badly they felt afterward. Women reported feeling depressed, guilt ridden, highly anxious, and overwhelmed by intrusive re-experiencing of the abortion. Some reported marked discrepance between the expectation of their abortion experience and the reality of their abortion experience. While each woman reported marked relief in the severity of distressing symptoms as a result of group participation, most of the women requested continued individual or group follow up as it was reported that a seven week group was not sufficient to address the severity of distress for some.

Young women report anger at abortion providers and "feminists" that underestimate the severity of their abortion experience..This underestimation may be due to either to unrealistic expectations of the impact of the abortion on the part of the young woman or due to inadequate pre-abortion counseling on the part of providers to prepare her for this impact.

In addition, cases of significant and sudden onset of high risk sexual behavior directly after abortion suggest not only the severity of psychological distress but also the compulsion for repetitive behavior to re-enact a repeat pregnancy or repeat abortion.

**Case 4**

One women reported becoming promiscuous immediately after an abortion following a first sexual encounter at age twenty four. She reported having over one hundred sexual partners within the following six years until she began addressing the abortion experience. Two others women who aborted after a first sexual encounter at age twenty, reported at least sixty sexual partners within the following ten years. All women experienced a repeat pregnancy and some experienced a repeat abortion.

Vulnerable women are also at high risk to experience adverse psychological responses to abortion. Many women are vulnerable due to a history of early adverse life events, low socio-economic status, pre-morbid psychiatric problems, inadequate access to healthcare services or a combination of these factors. In a rural practice offering post abortion psychological support, women in their late thirties and early forties cited a history of multiple abortions as the etiology to a treatment resistant depression lasting from twenty to thirty years. Of significance, is that these women also experienced abortion at a younger age, during adolescence. In addition to a major and recurrent depressive disorder, these women

presented with a history of substance abuse, especially alcoholism, sexual promiscuity, a history of failed relationships, and multiple abortions. This sub-group presented with chronic and delayed post traumatic stress symptoms associated with their abortions.

This author also notes that spiritual distress is a distinct factor present with the psychological distress after abortion. Spiritual distress is not religiously oriented. It appears that women experience a violation of conscience that is more of a maternal or human rather than religious origin. For example, many women who presented with distress had no religious affiliation nor had practiced any tradition either prior to or after their abortion. Their protracted guilt, remorse, or regret associated with the abortion appeared intrinsic rather than extrinsic. Many women had questions for this author such as: What happens to the baby? Does the baby feel pain? Where do the babies go? Where is my baby? Will God punish me for having an abortion?

**Case 5**

Similar to the findings by Gissler (1996) and Morgan (1997) for high suicide rates after abortion, within a perinatal mental health practice, this author found approximately 8-10 cases of women who were referred for postpartum depression as the presenting problem but who retrospectively reported a first suicide attempt following several weeks or several months after a first abortion. None of the women had addressed the abortion. Several had experienced multiple suicide attempts. For these women, antepartal depression resulted from the distress associated with an unresolved past abortion that is triggered by the current pregnancy.

Typically, healthcare providers within a specialty practice take an extensive history according to their respective disciplines. Hence, mental health providers do not typically obtain an extensive reproductive history including

the incidence or severityof abortions. Similarly, obstetric and gynecological professionals do not typically obtain an extensive psychiatric history. The absence of a comprehensive history that includes two often non-disclosed (unless directly asked) subjects, such as suicide and abortion, may be another reason why many health care providers have not made this association.

***A Bio-psycho-social Paradigm***

A socio-political paradigm (Andropolous 2000) dominates the abortion issue. The pro-choice ideology is overly simplistic and concrete with no place for women who are distressed over their abortion, regret their abortion, or whose reactions may change from one of initial relief to one of severe psycholgical distress, or dissatisfaction later. This limited framework is another barrier that has prevented healthcare profesionals from identifying negative abortion outcomes. Moreover, the socio-political paradigm of abortion has limited scholarly inquiry into the full range of women's actual responses to abortion, the impact of abortion across phases of the life span, and abortion experiences among diverse populations. This is a real disservice to women. In the wake of this new and methodologically sound data on the impact of abortin on health, healthcare professionals have an ethical obligation to adequately inform, identify, treat, and prevent adverse abortion outcomes. Likewise, policy makers have an ethical obligation to protect public health, welfare, and safety.

A biopsychosocial paradigm that is oriented toward health and illness consistent with the rest of healthcare provides a more accurate framework to assess the full range of response to abortion and more accurately measures "health" which is central to the Roe argument..New evidence refutes the idea that abortion is a stress reliever for women. Instead, abortion as a type of psychological stressor (Rue &

Speckhard 1992) provides the most consistent framework to understand psychological distress after abortion. Stress responses emerge over a continuum of time from immediate, delayed, and chronic and over a spectrum of severity from absent to severe. It should be noted that absent responses to abortion typically include avoidance, denial, or a delayed reaction of psycholgical distress. Women who have abortions at a younger age and vulnerable women represent populations that experience abortion the most severely at all points on the continuum. Moreover, younger womens are those most likely to experience avoidance, denial, or delayed reactions to abortion. Unfortunately, this pathological pattern of what appears to be "no response" by so many has inaccurately been interpreted as normal or "benign" (Adler 2000).

***Conclusion***

In conclusion, it is becoming increasingly evident that whereas previously younger and more vulnerable populations were considered the most at risk for adverse psychological consequences if abortion was *denied,* this author has observed and empirical data support, that because of these vulnerabilities, younger and vulnerable women are *paradoxically the most adversely affected by abortion.* Women who present with a psychological or biological vulnerability may actually exacerbate this risk by aborting. This is significant because younger and vulnerable women are the population having abortions. In contrast, this author concludes that when comparing similar populations, younger and more vulnerable women who deliver demonstrate less adverse short-term and long-term psychological effects than those who abort. Moreover, those who deliver are less likely to engage in high-risk behaviors as motherhood acts as a protective factor to vulnerable women who may be at risk for self-destructive tendencies. Even if the women does not

choose to rear the child, the short-term and long-term stress associated with aborting a pregnancy far outweigh the risks associated with delivering a pregnancy. This evidence challenges the original argument posed by Roe vs. Wade that suggested "distress associated with additional offspring may force a distressful life and future". The Roe argument incorrectly compared the psychological risks of aborting with the psychological risks of child rearing. Rather, the psychological risks associated with the event of aborting need to be compared with the psychological risks associated with the event of delivering. Compelling evidence now conclude that the abortion procedure is unsafe. As such, making abortion unavailable will be the strongest deterrent to reducing the incidence of psychiatric morbidity and mortality associated with abortion. Some may consider alternative deterrents such as restrictions to abortion, closer monitoring after abortion, or mandatory reporting of adverse events associated with abortion in order to reduce abortion related mortality. However, similar safeguards to protect the public health need to be imposed for abortion as are imposed to protect the public health from other threats to health and safety. For example, pharmaceutical
agents that incur death or inflict injury to the extent that it is now known abortion does, are made unavailable despite public outcry. Often, once the public is made aware of these threats, public acceptance follows, and demand decreases. The elimination of smoking in public facilities, the removal of Vioxx from the market due to cardiovascular risks, and prohibition of most antidepressant use in children are recent examples of effective blanket
restrictions to promote public health and safety.

Moreover, as many women attest, the unlimited access to abortion results in pregnancies that never would have otherwise occurred. In sum, the supply of abortions creates the demand. for abortions. Thus making abortion

unavailable will not only reduce abortion related mortality and morbidity but denying legal access to abortion will reduce the incidence of abortions, as well as reduce the incidence of unwanted pregnancies. It is in the interest of public safety and welfare for the United States judicial system to take a pro-active stand.

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*Appendix I Table I*

STUDIES IDENTIFYING POST-ABORTION

PSYCHOLOGICAL STRESS

Table 1

STUDIES IDENTIFYING POST-ABORTION STRESS ACCORDING TO LEVELS OF KNOWLEDGE DEVELOPMENT

| DATE | AUTHOR | SAMPLE SIZE | DESIGN/METHOD | TIME SINCE ABORTION FOR THOSE WHO IDENTIFIED IT | INSTRUMENT USED | OUTCOME/ CONCLUSION |
|---|---|---|---|---|---|---|
| LEVEL I 2004 | Rue, et al | N = 548 Russian and American women | Retrospective, descriptive, cross cultural | 6-10 years | Traumatic Stress Institute Belief Scale (TSI) | 79% met full or partial PTSD symptoms with international sample. Found adverse life events predict high stress response. |
| 2002 | Mufel, et al | N = 150 women | Retrospective interview | 6-10 years | IOE | 46% reported PTSD symp-toms. |
| | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2000 | Major, et al | N = 442 women | Prospective Study | 1 hour pre-abortion up to 2 years post-abortion | DIS, PTSD standard measure | 20% reported depressed mood and negative emotion increased over time. Identified younger age as risk factor. 1% reported PTSD. |
| 1998 | Simonds, et al | N = 27 women experiencing me-dical abortion du-ring US clinical trials 1994-1995 | Prospective study, in depth interviewing | | | Reports some "strong, unexpected and traumatic reactions" in encountering embryo. |
| 1998 | Miller | N = 45 women post-abortion during clinical trials 1994-1995 | Prospective study, telephone interview and self-report | Pre-abortion two weeks and post-abortion six weeks | | Found unexpectedly high stress response at 2 weeks. Conclude that response can worsen over time. |

Table 1: Studies Identifying Post-Abortion Stress According to Levels of Knowledge Development (continued)

| DATE | AUTHOR | SAMPLE SIZE | DESIGN/METHOD | TIME SINCE ABORTION FOR THOSE WHO IDENTIFIED IT | INSTRUMENT USED | OUTCOME/ CONCLUSION |
|---|---|---|---|---|---|---|
| LEVEL I (Cont'd) 1994 | Bagarozzi | N = 18 women | Case studies | | Family relation-ship history inter-view, Mosher Guilt Inventory, sex history inter-view. | Identify abortion as single traumatic event, Category III Post-Traumatic Stress Disorder, indicating de-layed response and mas-sive denial of abortion and trauma. |
| 1994 | JoAnn Angelo | N = 9 | Case studies from outpatient clinic | | | Post-abortion grief, pa-thological grief and cases of Post-Traumatic Stress Disorder. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1993 | Erickson | | | | | Described model of post-abortion and development of PTSD. Post-abortion as traumatic stressor, empha-size role of aggressor. |
| 1990 | Barnard | N = 80 out of 984 women completed study | Prospective study | Time of abortion to 3-5 years later | IOE as well as MCMI | Symptoms of PTSD. 20% reported high stress reaction. Author also con-cluded that risk factors include negative relation-ship with mother, history of past emotional problems conflicted relationship with aborted child. |

Table 1: Studies Identifying Post-Abortion Stress According to Levels of Knowledge Development (continued)

| | | | | | | |
|---|---|---|---|---|---|---|
| LEVEL I (Cont'd) 1987 | Reardon | N = 252 self-selected, high distressed wo-men after abortion | Descriptive study in-cluding 42 states in US | 3 years | Survey/Question-naire | 94% reported negative symptoms, 62% report PTSD. |
| 1987 | Speckhard | N = 30 self-selected high distressed women after abortion | Retrospective, des-criptive study, struc-tured clinical inter-view | 5-10 years elapsed since abortion | SCID | 55% recorded suicide thoughts and 31% reported suicide attempt. |
| 1984 | Cohen and Roth | N = 55 women | Prospective study | Obtained pre-abortion and 5-hour post-abortion measures. | IOE | Generalized abortion re-sponse syndrome. Avoid-ers experienced greater distress than non-avoiders. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1983 | Congleton & Calhoun | N = 25 women self-selected for emotional distress after abortion. Mean age of sample: 22 | Retrospective inter-view, self-report | IOE, approximately 12 years since abortions | | Those who reported distress recorded greater religiosity than those who did not report distress. Qualitative themes emerged such as ambi-valence prior to abortion in distressed group. Dis-tressed group reported feelings of depression or denial of abortion ex-perience as well as desire for replacement of fetus. |

Table 1: Studies Identifying Post-Abortion Stress According to Levels of Knowledge Development (continued)

| DATE | AUTHOR | SAMPLE SIZE | DESIGN/METHOD | TIME SINCE ABORTION FOR THOSE WHO IDENTIFIED IT | INSTRUMENT USED | OUTCOME/ CONCLUSION |
|---|---|---|---|---|---|---|
| LEVEL II 2005 | Cougle, J. et al | N =1033, Ages 15-44 Representative Sample of first pregnancy aborted | National of Survey of Family Growth Epidemiological Cohort | 10 years | DSM-IV, GAD criteria | Results show a higher rate of GAD among aborting vs. delivering women. |
| 2003 | Reardon, et al | N = 56,741 medical record | Epidemiological, compare psychiatric admission rates for abortion vs. controls. | 90 days, 180 days, 2 yrs. and 4 yrs. | | Abortion group had 2.6 higher admission rate than delivery group at 90 days. Abortion group had higher rates in all other time frames. |

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| 2002 | Reardon, et al | N=4,463 women National Longitudinal Study of Youth | Prospective study. | | CES-D | Married women who aborted were more likely to be at high risk for depression compared to those who delivered. |
| 2002 | Coleman, et al | N=55,000 women with 14,297 in post-abortion group and 40,122 in post-birth group. | Retrospective record- based comparison study of birth vs. post-abortion. | | | First time outpatient mental health treatment. 90 days after pregnancy, post-abortion group had 63% more outpatient claims than birth group. |

Table 1: Studies Identifying Post-Abortion Stress According to Levels of Knowledge Development (continued)

| DATE | AUTHOR | SAMPLE SIZE | DESIGN/METHOD | TIME SINCE ABORTION FOR THOSE WHO IDENTIFIED IT | INSTRUMENT USED | OUTCOME/ CONCLUSION |
|---|---|---|---|---|---|---|
| 1997 | Morgan, et al | N = 408,000 records 1991-1995 | Retrospective MR linkage comparing post-abortion, post-miscarriage and post-natal group | | | 2X incidence of suicide rate for post-abortive women vs. post-natal women. Authors conclude that decline worsened mental health may be side effect of abortion with more than 2X as likely rate of committing suicide. |

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| 1996 | Gissler, et al | N = 9000 Finnish mater-nal death rec-ords | Epidemiological; compared suicide rate for birth, abortion or miscar-riage outcome | 1 year post-pregnancy outcome | | Results show 5.9 times higher suicide rate of post-abortion group vs. post-partum group and 3 times higher suicide rate than general population. |
| 1981 | David, et al | N = 71,378 Danish medical records | Epidemiological; compared psychia-tric admission rates of abortion and birth vs. controls | 90 days after birth outcome | | Found 18.4 per 10,000 women vs. 12 per 10,000 women higher psychiatric admission for abortion. |